Michigan Trout Unlimited Testimony
Recreational Gold Prospecting
House Natural Resources Committee – December 6, 2016

House bill 5862 proposes to create an exemption from Part 301 for certain types of gold prospecting in inland lakes and streams. This activity is extremely damaging to Michigan's streams, and should not be permitted, let alone granted an exemption from the primary statute developed to ensure stream protection for public interests. Michigan Trout Unlimited opposes the bill, and will attempt in this testimony, to summarize the geophysical, biological, and economic justifications for our opposition to gold prospecting occurring in streams.

Geophysical

Michigan streams are unique from many other parts of the country, because of our unique geology. The most relevant difference to this issue is that our streams are relatively "flat" or low slope, and comprised of mostly "fine" or small sediments; namely sand, silt, and small gravel. Whereas streams from other parts of the country may flow over bedrock, or be constrained by very large boulders, ours are easily disrupted, moved, altered or modified. Our streams are in a complex physical balance with all of its components. If any component of our streams is altered, there will be consequential changes to some other aspect of them, somewhere in the stream. This fact, is what underlies the need for activities altering Michigan streams to be thoroughly reviewed for unintended consequences and require permits. Think of our streams similar to a *Jenga* tower game, but trickier. Almost any piece removed will cause instability and damage unless engineered incredibly carefully.

Most of our streams are predominantly compromised of sand-bottomed long reaches, interspersed with gravel riffles. If you looked at a river and a staircase from the side, the riffles would be similar to the edges of the steps. Its where heavier materials like rocks, gravel and possibly gold have come to rest. These riffles are referred to as "hydraulic" or "grade" controls, in that they function to hold in place, the stream bed materials upstream from them. If they are removed or modified, the streambed upstream from them will become mobile. This results in erosion of the streambed, large volumes of sand moving downstream smothering aquatic life, and eventually can result in streambank erosion and slumping as well. These riffle areas are also the most likely places that gold prospectors would want to explore or dredge. Allowing dredging and manipulation of these key stream features will result in many other forms of stream impacts.

Biological

Digging, moving or dredging streambed material from streams, will disrupt or kill the aquatic life that lives on and in them. In our streams, a large portion of the algae and the aquatic insect life that feeds on it, is found in or on the streambed material. Those will be dislodged, damaged or killed with gold prospecting. Trout are like most other stream fish species, in that they must do their spawning and reproduction on gravel. The eggs come to rest just under the streambed, in the spaces between gravel in those riffles. Once they hatch, the juveniles stay hidden in the gaps between the gravel. The requirements for these fish to be successful reproducing are exact, and disruption of the special places we have that permit it to occur, will directly lead to a lowering of the fish populations. Just a handful of the right riffles, can produce all of the juvenile

trout or salmon needed to later fill up the entire rest of the river length. Our riffles are the hatcheries for producing all of our incredible fishing.

Gold prospecting squarely poses the risk of biological damage to the fish production in a stream, and the food the fish depend on. This can result directly from killing the fish or their food at different life stages throughout the year (e.g., sucking the juvenile fish through a suction dredge), or by eliminating habitat that was critical to their reproduction; but it will also result from the unintended physical changes the activity sets into motion. Removing a riffle will send sand from upstream moving downstream, and that too can result in sand covering up other critical riffles, or filling in a deep pool fish needed to survive. Gold prospecting in streams, depends on moving and processing streambed material; the more you move the more gold one might find. However, the more streambed material you move, the more damage will be caused in a stream; and it does not take much at all to create a huge problem.

Economic

There are several sources of information on the economic contribution of sportfishing to the Michigan economy. Different sources vary to some degree, but its most commonly cited, from federal surveys, that sportfishing in Michigan contributes over $4.2 billion annually to our economy, provides approximately 38,000 jobs, and generates $287 million in state or local tax revenue. High quality, functioning trout, salmon and steelhead streams for example, are working for us. They are producing critical taxes, expenditures, and jobs that Michiganders rely on. The health of these streams and fisheries that rely on them is a serious business, with billions of dollars annually being produced by them – sustainably if we protect them.

In addition to the loss of fisheries and economic wealth they create, the economics of fixing the damage that gold prospecting in streams would cause, alone would surpass the value of gold that could be found in streams in Michigan. If we had to repair the physical damage created by gold prospecting in streams, the cost to fix even relatively small sites would easily be in the ten's of thousands of dollars. The repair itself would have to go through Part 301 permitting, receive careful engineering, entail contractors and construction equipment mobilization, etc. The gold to be found would not even come close to paying to fix the physical damage created – let alone offset the economic loss of diminished sport fisheries.

The Michigan recreational gold prospectors, in a past meeting with us, acknowledged themselves, that in Michigan, their primary find amounts to gold flour, or the tiniest particles of gold; and that on a good day in our streams, they might get enough to cover their gas bill to get to the river; but will be costing Michigan anywhere from ten's of thousands up to millions of dollars.

Permit Requirements for TU's stream enhancement efforts

We ourselves, must receive and navigate Part 301 permits in order to conduct activities in streams, even when those activities are intended to create positive benefit to streams and fish. We pay the permit fees, we navigate the process of permitting, we often have to pay for additional sediment contamination testing, we often have to pay for complex hydraulic analyses for permit reviewers, and often must pay certified engineering consultants to produce bonded design plans. We do that because we must also ensure that our activities, however well intended, do not cause unintended damage and we recognize that our streams are inherently prone to those. We abide by these rules and cannot support a damaging activity like gold prospecting in streams to be exempt from them.

Closing

We've attempted to summarize the rationales behind why this activity will be damaging, and pose a serious risk of loss of quality of life in Michigan. If any committee member or their staff wishes for more in-depth discussion of these rationales, we are available at your request. Staff with our organization in Michigan are trained professional stream scientists, fisheries biologists, fluvial geomorphologists and certified stream engineers. In addition, our national organization has tackled this gold prospecting issue in several other states across the country, seeing that scientific facts led to appropriate public policy, and they have offered to bring deep resources to this topic in Michigan if needed.

Our streams and the fisheries they create, are public resources. In Michigan, it has literally taken a hundred years to fix much of the damage to our streams that was done by the initial logging era. Where we have been successful, we now have healthy and productive streams that are used by millions of people, visited by people from all over the country and world, add billions to our economy, and are relied upon heavily for a myriad of reasons. We support outdoor recreation being vibrant and diverse in Michigan, but gold prospecting in our streams is an activity that just doesn't fit. Its very nature combined with the nature of our streams results in a significant net loss proposition for Michiganders. We can't support gold prospecting in our streams, and we oppose HB5862's proposal to exempt them from Part 301 permitting requirements. Thank you for your consideration of our testimony on this subject.

Respectfully,

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